

CONGRESSIONAL DEMOCRATIC E-STRATEGY FOR ECONOMIC GROWTH
Executive Summary
April 5, 2001

Congressional Democrats today put forth an E-Strategy, a detailed series of proposals to spur innovation, productivity, economic growth, and job creation.

This agenda makes 10 recommendations in four key areas:

- I. Accelerating digital opportunity
- II. Boosting research and development
- III. Enhancing education, training and skills
- IV. Transforming to an Information Age

Ten Policy Recommendations

I. Accelerating Digital Opportunity

1. *Make broadband Internet available to every American by the end of the decade.*

Making broadband access available to every American must be a high priority and an essential part of our effort to close the digital divide. To spur deployment, this agenda includes tax incentives and expanded federal financing assistance through the Rural Utilities Service. It includes full funding of the rural loan guarantee program to provide high-speed Internet service and local video to rural areas, and facilitates telecommuting to help people employ these technologies to work from home.

2. *Help all regions take full advantage of information technology to prosper.*

No region or group of Americans can afford to be on the wrong side of the digital divide. This agenda includes full funding for the E-rate program, which President Bush has threatened to dismantle, in order to finish the job of wiring every school and library to the Internet. It also calls for fully funding programs like the Technology Opportunities Program to help develop information infrastructures and services. Our agenda calls for the Economic Development Administration to support more technology-based development initiatives. It also supports the highly successful Community Technology Centers programs through which businesses work with government to provide disadvantaged students access to computers. And our agenda creates a Technology Corps through the Corporation for National Service to bring technology experts skills into underserved communities. President Bush has threatened to block-grant the CTC program and cut funding for the Corporation for National Service.

3. *Keep costs of information technology low and within everyone's reach.*

Our agenda seeks to foster competition in order to keep rates low and accelerate the deployment of new technologies. It calls for implementation of existing federal requirements already enacted to keep rates affordable for all Americans in rural, tribal, inner-city and suburban areas. Finally, it promotes deployment of the next generation of wireless services to make the web available to

everyone, whether they are mobile or living out of the reach of wires.

II. Boosting Research and Technological Innovation

4. Increase federal support for basic research and development.

Government-sponsored research fosters technological innovation and economic growth. This plan proposes to double civilian R&D funding, reverse the slide in Department of Defense R&D spending, make the R&D tax credit permanent, and explore its expansion. By contrast, the Bush budget proposes to slash R&D funding below its already historically low levels.

5. Support science and technology programs and strong intellectual property protection.

This agenda gives full funding to the Advanced Technology Program, and doubles funding for the National Science Foundation. It would also ensure necessary funding for the U.S. Patent and Trademark Office while strengthening intellectual property protection to encourage further innovation.

III. Enhancing Education, Training and Skills

6. Improve math and science education for our children and ensure their computer literacy by sixth grade.

This plan would require states to set science educational standards and to align their assessments to these standards, and it calls for making every child in America computer-literate by the sixth grade. It would improve teaching in math and science, and help schools and teachers take advantage of information technology.

7. Encourage companies to invest more in training and recruitment, and help workers develop the information technology skills they need.

This plan would enhance support for distance learning and improve copyright laws to encourage it. It would also provide matching grants for incumbent worker training programs, and encourages collaboration with industry to fund graduate study in science and engineering. It would increase funding for high-tech workforce training opportunities and establish programs to provide technical skills training for workers, including those both employed and unemployed, through public-private partnerships. It would also make the Section 127 tax credit permanent and expand it to include graduate education in order to assist employers in providing educational opportunities for their employees.

IV. Transforming to an Information Age Economy

8. Foster e-business with secure networks and workable solutions to protect personal privacy.

This agenda seeks to promote consumer confidence in e-commerce without stifling technological innovation by protecting consumer privacy, strengthening cybersecurity, and stemming the tide of unsolicited e-mail.

9. *Smooth the transition to the Information Age by updating policies on exports, trade, Internet taxation, immigration and small business.*

Government must respond swiftly to new developments in technology and business practices. This agenda would reform export controls to reflect new economic realities, and create a tariff-free zone for cross-border e-business. It would establish a technology-neutral policy for Internet taxation. It also would speed up the Immigration and Naturalization Service's processing of all applications, and create a system of regional e-business assistance centers to help small businesses.

10. *Foster e-government to improve efficiency and speed public interactions with government.*

Government must become as able a practitioner of electronic business practices as it is a proponent of them. This agenda calls for the creation of a Chief Information Officer for the federal government, and empowering that person with the funds to make digital government work. It would also increase electronic access to Congressional Research Service reports.

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Introduction: Information technology has fundamentally changed the structure of our economy and the way society functions. It has infused new productivity into all sectors – ranging from telecommunications, to health care, to education, to agriculture, to transportation and even politics.

In short, the Information Age has arrived. The high-tech sector that led to its creation is continuing to drive that economy as a strong, progressive force for innovation, better jobs, higher incomes and new opportunities for America's children.

Republicans have raised the alarm that the recent market volatility may be a prelude to a recession rather than a market correction. They have urged deep cuts in key investments such as R&D and technology programs to pay for sizable tax cuts – particularly for upper-income Americans. They call for tax cuts, combined with deregulation, to stimulate the economy.

Democrats support tax cuts and regulatory relief where appropriate. But we also believe America needs a comprehensive plan to take advantage of information technologies and the economic opportunities they provide. We must continue to strengthen America's productivity and standard of living. Tax cuts must not come at the expense of the other key investments that will harness new technologies to create the climate for sustained economic growth.

Democrats support paying down more of the national debt to keep interest rates low, which is vital for business growth. And we leave room to support the specific investments necessary to keep this new information age growing: research and development, education and skills training for a world-class workforce, and accelerated deployment of the latest telecommunications technology.

Today, we are unveiling an E-Strategy for Economic Growth in the 107th Congress to stimulate research, investment, and innovation.

Two years ago, Senate Democratic Leader Tom Daschle and Gateway Computer Chairman and CEO Ted Waitt, in partnership with The Progressive Policy Institute, formed the New Economy Task Force. In its final report, the task force identified four main areas for policy focus: 1. research and technological innovation; 2. education, training and skills; 3. digital opportunity; and 4. and the transformation to an Information Age. House Democrats participated in and supported this effort and pursued complementary efforts throughout the 106th Congress.

This agenda builds on these recommendations with ten proposals to advance robust and widespread economic growth that will improve the lives of working families. We will work vigorously toward their enactment in the 107th Congress.

Ten Key Policy Recommendations

I. Accelerating Digital Opportunity

1. Make broadband Internet available to every American by the end of the decade.
2. Help all regions take full advantage of information technology to prosper.
3. Keep costs of access to information technology low and within everyone's reach.

II. Boosting Research and Technological Innovation

4. Increase federal support for basic research and development.
5. Support science and technology programs and strong intellectual property protection.

III. Enhancing Education, Training and Skills

6. Improve math and science education for our children and ensure their computer literacy by the sixth grade.
7. Encourage companies to invest more in training and recruitment, and help workers develop the information technology skills they need.

IV. Transforming to an Information Age Economy

8. Foster E-business with secure networks and workable solutions to protect personal privacy.
9. Smooth the transition to the Information Age by updating policies on exports, trade, Internet taxation, immigration and small business.
10. Foster E-government to improve efficiency and speed public interactions with government.

I. ACCELERATING DIGITAL OPPORTUNITY

Overview: The effort to accelerate digital opportunity must include a focus on both the deployment of physical capital or the technological infrastructure of the digital age and the growth of the human capital necessary to animate that technology.

High-speed Internet access, or broadband, is fast becoming an indispensable tool for schools, businesses, libraries, community organizations and hospitals. Advanced applications from distance learning to telemedicine to telecommuting demand access to high speed networks. Almost every company in the telecommunications business wants to deliver broadband services.

That is why our goal is to make broadband services accessible to every American individual or business by the end of the decade or sooner. The skills necessary to navigate these services are just as critical. We want to make broadband access as universal tomorrow as telephone access is today. And we want to help Americans everywhere develop the skills to take advantage of that access.

A 2000 report by the U.S. Commerce and Agriculture departments requested by Senate Democrats showed that less than five percent of towns with populations under 10,000 have broadband access, while 65 percent of cities with over 250,000 people have broadband access.

Similarly, a recent FCC report found that rural areas, inner city consumers, low-income consumers, minority consumers, and tribal areas are lagging far behind in broadband deployment.

In general, those who are poor and live in rural areas are about 20 times more likely to be left behind than wealthier residents of urban areas, according to a Commerce Department study.

Additionally, the rate of broadband deployment will affect future productivity and economic development. Access to high-speed telecommunications technologies, especially for business, is becoming more important in terms of competitiveness and in determining business location and expansion decisions.

To be on the less fortunate side of the digital divide means less access to the education, training, health care, e-commerce, entertainment, and communications opportunities that are available online. Democrats will continue to be vigilant in our desire to ensure that we further close the digital divide between the technology haves and the technology haves-nots. It is also especially crucial for people with disabilities to have access to the most advanced technologies available.

The rate of broadband deployment will affect the productivity and economic development of each of our nation's communities, and the economy as a whole. That is why Democrats will press for multifaceted initiatives to address these critical needs.

Finish Wiring Every School and Library to the Internet.

As part of his education reform package, President Bush is proposing to turn the E-rate program into a block grant by combining it with other Department of Education programs. Moving the E-rate from the FCC to the Education Department would jeopardize this reliable source of funding by making the E-rate dependent on congressional appropriations. It would also jeopardize participation by private and parochial schools, as well as by libraries.

In its current form, the program receives funding from the universal service contributions assessed on telecommunication carriers, which we believe should continue. We support continued full funding of the E-rate at the current \$2.25 billion level.

Support the Deployment of Advanced Telecommunications Infrastructure.

Democrats have long supported efforts to deploy broadband networks. We now set as our goal making broadband Internet available to every American by the end of the decade.

In the last Congress, Democrats were instrumental in achieving enactment of a rural loan guarantee program to provide high-speed Internet service, as well as video, over satellite, cable and other means to rural areas. Full funding of this program is a high priority for Democrats in this Congress.

The Commerce Department's Technology Opportunities Program (TOP) should also be restored to its full fiscal year 2001 level of \$45 million. President Bush's budget would reduce funding for this key program to only \$15 million. TOP promotes the widespread use of advanced telecommunications and information technologies in the public and nonprofit sectors. This program provides matching demonstration grants to state, tribal and local governments, health care providers, school districts, libraries, social service organizations, public safety services, and other nonprofit entities to help them develop information infrastructures and services that are accessible to all citizens, in rural as well as urban areas.

Finally, we propose \$2 million for targeted research to identify a widely acceptable and affordable method to integrate voice telephone and broadband services with additional Internet services. This research would lessen geographical and economic barriers to broadband availability, making its application more widespread, especially in rural and disadvantaged areas.

In addition, the Department of Agriculture's Rural Utilities Service (RUS) should be expanded to co-invest with telecommunications providers in rural broadband for business applications. Currently only \$670 million, or 13.3 percent, of the RUS budget is spent on telecommunications, and most of this is for telephone service. Even so, President Bush's budget proposes to eliminate the Rural Telephone Bank, which requires only \$3 million to provide \$175 million in loans.

One approach toward improving RUS was in a bill sponsored last year by Senators Byron Dorgan, Tom Daschle and others, that would have expanded the ability of the RUS loan program to help finance the deployment of broadband telecommunications by rural utility providers. They

will soon reintroduce similar legislation.

Fund the Economic Development Administration to Support Technology-Based Economic Development in Disadvantaged Communities.

Funding for the Department of Commerce's Economic Development Administration (EDA) has declined in the last 15 years, and, by law, much of it is focused on old economy factors of physical infrastructure. These remain key functions for which we support full funding.

We also believe EDA needs additional resources to develop a new focus on funding technology-based economic development initiatives in economically distressed communities, including tribal areas. Examples would include seed venture programs, technology-incubators, industry-university research partnerships, telecommunications infrastructure, and industry collaborative technology modernization initiatives. EDA should also foster development of content programs that will provide incentive for those living in economically distressed areas to participate online in the Information Age.

Support the Community Technology Centers Program.

Democrats strongly support the Community Technology Centers (CTC) Program, which is helping prepare the 21st Century high-tech workforce of tomorrow. This program is administered by the Department of Education and provides opportunities for disadvantaged students and their families to access computers so they may expand their computer and knowledge skills in supportive environments. CTCs have enabled a wide variety of public-private partnerships to establish technology access points within underserved communities. The program has allowed students to have more powerful educational tools at their disposal while providing work force training to their parents.

President Bush does not mention Community Technology Centers in his Elementary and Secondary Education Act proposal, but has advocated turning the program into a block grant. Democrats support maintaining the program in its current form and investing \$100 million in this year's budget for the Community Technology Centers Program. Senators Barbara A. Mikulski and Ted Kennedy are leading the effort to establish 1,000 new Community Technology Centers.

Provide Incentives for Broadband Deployment.

While competition is essential, competition alone may not be capable of fostering deployment of important technologies such as broadband to all segments of our society. Where necessary, Democrats support technology-neutral efforts such as tax credits that would accelerate broadband deployment.

One example of such an effort is the Broadband Internet Access Act of 2001, S. 88 introduced by Senators Rockefeller and Kerry, and its House companion, H.R. 267 introduced by Representative Bob Matsui. It would give companies the incentive to build current-generation broadband facilities in rural and urban areas by using a very focused tax credit. It would offer any company that invests in broadband facilities in rural or inner city areas a ten-percent tax

credit over the next five years, and broader credits for companies that invest in next-generation broadband services.

Fully Implement Universal Service Provisions of the Telecommunications Act.

We believe universal service reform for rural carriers deserves the urgent attention of the Federal Communications Commission. When Congress passed the Telecommunications Act of 1996, an assurance was given to rural America that it would not be left behind. There is a growing bipartisan recognition that, five years later, the Commission has failed to implement the positive reforms required under the Act that were designed to ensure that all of America can access advanced telecommunications services.

The Commission's Federal-State Joint Board on Universal Service appointed a Rural Task Force (RTF) in 1998. The RTF recently completed its work, and the Commission is now considering its recommendation, as well as access charge reform for rural local carriers. We are asking the Commission to complete action on these proceedings quickly so that the new regime can be implemented by July 1, 2001.

The Act's universal service provisions mandate the necessary support to carry out the letter of the law: "access to advanced telecommunications and information services should be provided in all regions of the Nation." Yet, since 1994, the FCC has imposed "interim caps" on the high-cost function of universal service support that have never been adjusted for inflation. Democrats will work to ensure sufficient funding for universal service, as the law clearly requires.

Create a Technology Corps.

To respond to the challenges of the digital economy, lower-income areas in rural and urban America need the type of tutoring, training, and mentoring in the newest technologies that dedicated volunteers can provide. That is why we are proposing a new Technology Corps of the Corporation of National Service, made up of dedicated individuals who volunteer to put their technological expertise to work in underserved communities. Representative Mike Honda has introduced H.R. 1149, a bill which would create such a Technology Corps.

Unfortunately, President Bush's budget proposes funding for the Corporation of National Service for 2002 at seven percent below levels needed to maintain national service programs at 2001 levels, according to the Congressional Budget Office. Now is not the time to reduce our commitment to national service.

Close the Digital Divide for Native Americans.

Despite the dramatic rise in access to broadband services across the country, too many Native Americans face a crisis due to the lack of access to basic telecommunication services. Recent Department of Commerce studies have measured the state of connectivity in Indian country and found that the current infrastructure in many Native American areas falls far behind the rest of the country, threatening the economic, educational and cultural self-sufficiency of tribes and their communities. To combat the situation, we propose the creation of a targeted program within the

National Telecommunications and Information Administration (NTIA) to advocate tribal telecommunications policy in three areas: access, training and research. This program would serve as a central clearinghouse for information and technical assistance, and would create a separate funding source to promote long-term solutions toward building sustainable tribal economies through technological development.

Fostering Competition in the Telecommunications Marketplace.

Competition has fostered the explosion of the telecommunications and high-tech industries. Embracing competition has made the United States the leader in the new information age. Europe, by contrast, has not advanced as far we have. Many European leaders now acknowledge that their failure to promote competition was a major policy blunder of the past decade. Since the 1996 introduction of competition in the U.S., incumbent companies that own facilities such as telephone wires, cable wires, and wireless facilities, as well as new competitors, have been upgrading and deploying new facilities to provide consumers with new, better, and more affordable service. Given the significant benefits we have gained from a competitive telecommunications marketplace, we support continuing to foster competition.

Promote Advanced Mobile Wireless Services.

Consumer and business needs for wireless services is growing rapidly in the U.S. and around the world. Today, more than 110 million people use wireless devices in the United States. Advances in technology are spawning a new generation of advanced mobile communications, which is making possible broadband wireless Internet access in a mobile setting. This will bring broadband capability to portable devices, enabling high-speed Internet access and other multimedia options.

Many other countries in Europe and Asia are moving quickly to deploy advanced mobile communications services. Dozens of nations have already issued licenses for these services, and many are planning future spectrum allocations. Unfortunately, the current allocation of spectrum in the U.S. is insufficient to support the broad development of advanced services throughout the U.S. While other nations allocate spectrum for this purpose, the U.S. lags behind and runs the risk of losing its position as the communications leader in the new economy.

The Administration should identify sufficient spectrum for advanced mobile communications development and deployment. We are concerned by recent reports indicating that the Bush Administration will follow DoD's lead on spectrum policy, which could significantly delay, if not render impossible, the coordination and deployment of advanced mobile communications systems. Democrats believe that coordinating commercial, defense and educational needs is critical to the nation and that no single interest should dominate the others.

Accordingly, the FCC should allocate this spectrum by July, 2001 and auction such spectrum by September, 2002, as established by the Clinton Administration executive order and the spectrum plan released by the U.S. Department of Commerce on October 20, 2000. If it becomes clear that a delay of the auction is necessary to maximize its effectiveness and address

telecommunications policy concerns, we would support extending the deadline.

The U.S. needs to be at the forefront of high-tech innovation. To remain a world Internet leader, the U.S. needs to allocate sufficient spectrum to make possible the development and deployment of advanced mobile communications services.

Facilitate Telecommuting.

The number one obstacle facing small businesses wishing to set up telecommuting programs is a lack of know-how. Senator Kerry introduced S. 522, and Representative Mark Udall introduced H.R. 1035, the “Small Business Telecommuting Act,” which sets up a novel pilot program at SBA to teach small businesses how to establish successful telecommuting programs.

This legislation costs a modest \$5 million over 2 years, and has special provisions that require SBA to target small businesses owned by, or employing, individuals with disabilities and disabled American veterans for outreach efforts. In addition to benefitting veterans and those with disabilities, the bills are pro-environment, pro-worker, pro-technology and pro-business.

II. BOOSTING RESEARCH AND TECHNOLOGICAL INNOVATION

Overview: Compelling evidence indicates that federal support for research boosts innovation, which is the driving force behind economic growth. At least two-thirds of per-capita economic growth comes from technological innovation.

Despite this evidence, federal support for non-defense R&D has fallen from about one percent of the Gross Domestic Product (GDP) in the 1960s, to 0.4 percent today. The President’s budget proposal for next year projects that non-defense R&D will decline by 7.8 percent, adjusted for inflation, by fiscal year 2005. This is more than five times faster than the decline in total federal spending.

Moreover, in direct contradiction to a bipartisan proposal to double the federal research budget over the next 11 years, the Bush budget proposes to increase funding for science and technology 15 percent more *slowly* than the overall budget. This will result in federal support for science decreasing by six percent by 2005 as a share of GDP.

Considering that most of the modest increase in funds will be in DoD and NIH, other areas of the federal research budget are likely to see cuts. Such cuts threaten to throw our research portfolio out of balance by not providing for needed advances in the physical sciences and engineering. Evidence of this problem is already emerging. President Bush’s 2002 budget virtually freezes funding for the National Science Foundation, cuts facility project funding by \$13 million, and provides no funding for new starts. His budget also fails to provide new funding for the Department of Commerce’s highly successful Advanced Technology Program.

D. Allen Bromley, a professor of nuclear physics at Yale and former science and technology

advisor to former President George H. W. Bush, recently wrote, “the proposed cuts by the Bush Administration to scientific research are a self-defeating policy. Congress must increase the federal investment in science. No science, no surplus. It’s that simple.”

Federal R&D supports not only innovation, but also the training of the next generation of scientists, engineers, and entrepreneurs. Democrats supported increasing the number of highly trained workers available to U.S. businesses under the H-1B program as a temporary fix, but a permanent solution requires support for funding to expand the pool of Americans who can compete for these jobs. Democrats believe investing in science today will help produce the next generation of American entrepreneurs and ensure our prosperity tomorrow.

Expand Federal Civilian Research.

Senators John D. Rockefeller and Joe Lieberman introduced a bill which passed the Senate in 1999 to double federal funding for basic civilian scientific, medical, and pre-competitive engineering research over 11 years. Similar legislation should be enacted in the 107th Congress, signed into law by President Bush, and fully funded to keep this timetable on track.

House Democrats, led by Reps. David Wu, Rush Holt, Ralph Hall and Eddie Bernice Johnson, have consistently supported increased funding for essential science programs. The House Democratic budget for 2002 provides \$300 million more than the Republican Budget for NSF, NASA and Department of Energy science programs.

Democrats also support increasing funding for information technology research by \$4.8 billion from 2000 to 2004, as recommended by former President Clinton’s Information Technology Advisory Committee. Senator Barbara Mikulski has also proposed to double our investments in the National Science Foundation over the next five years.

Increase Department of Defense Research Two Percent Per Year.

While President Bush has proposed increasing the DoD R&D budget by \$2.6 billion this year and \$20 billion over five years, in reality, a large share of this funding is expected to be spent not on research, but rather on development and testing of weapons, particularly a missile defense program. Since DOD funding accounts for a large share of federal support for research, such limited funding for basic and applied research will lead to overall reductions in federal support for research. To address this, Senator Jeff Bingaman has led an effort to increase DoD research funds two percent per year in inflation-adjusted funding.

Expand and Make Permanent the R&D Tax Credit

The R&D tax credit has been shown to stimulate increased industry research. In 1999, Congress extended the credit for five years. Democrats overwhelmingly support making this important credit permanent.

In addition to making the R&D tax credit permanent, Democrats also encourage the exploration of modernizing and expanding the credit by modifying its two-tier structure to give more firms

access to the higher marginal rate. This modification would create a new credit covering all industry expenditures (not just the increases) in research consortia and partnerships between industry and universities or federal laboratories. We believe this modification could make it easier for entrepreneurial firms and small businesses to better take advantage of the credit.

Ensure Adequate Funding for the U.S. Patent & Trademark Office.

Patent fees paid to the United States Patent and Trademark Office (USPTO) generate far more revenue than its actual budget every year. The additional funds are spent in other parts of the federal budget. The USPTO is increasingly important to the effort to ensure that U.S. companies remain globally competitive. Inadequate funding for USPTO causes American companies to experience a diminution in the quality of the agency's work, leading to higher litigation costs and uncertainty in the marketplace, or to huge backlogs in applications, which stifle innovation. As new technology has been an engine of job growth in this country, an efficient USPTO is essential to keep that engine running. To ensure adequate funding, USPTO should be allowed to keep all of the fees it generates every year to hire and train additional staff -- and keep its best and brightest so that U.S. patent applicants do not face a roadblock on their path to ingenuity.

Strengthen Intellectual Property Protection.

According to a 2000 study by Economists Incorporated for the International Intellectual Property Alliance, intellectual property is an increasingly significant part of the United States' economy. In 1999, the copyright industries (including motion pictures, sound recordings, music publishing, computer software, and book publishing) contributed an estimated \$677.9 billion to the U.S. economy. In addition, copyright industries' foreign sales and exports exceeded the estimated exports of almost all other leading industries. Democrats believe the continued growth of the copyright industry is critical to our economy, and that growth depends on maintaining strong protection for intellectual property rights. We must aggressively combat piracy both here and abroad through adequate funding and focus on this problem at the Department of Justice and the Office of the U.S. Trade Representative. Democrats also believe that as we take these steps we must not undermine or diminish important user rights, such as fair use, that promote innovation, scholarship and free speech.

Enforcement of our copyright laws must go hand in hand with encouraging innovative means for using new technology for the legal and competitive distribution of copyrighted material to consumers. As an example of the kind of steps that can be taken, for the past three Congresses Senator Patrick Leahy has introduced legislation, S. 407, to implement the Madrid Protocol, which the Clinton Administration transmitted to Congress for its advice and consent last year. This bill, in conjunction with the Protocol, would provide "one-stop" trademark registration at the USPTO for American companies, which currently must engage in the time-consuming and expensive process of registering their trademarks in individual countries.

III. ENHANCING EDUCATION, TRAINING, AND SKILLS

Overview: The new skills demanded by the New Economy require higher levels of education,

more high-tech training, and wider opportunities for lifelong learning. These enable workers to keep up with the fast pace of developments in technology and business practices. This will help them succeed in the new jobs that are opening, and thus remain competitive in the global economy.

Yet, there are disturbing signs that we are not investing enough in the most critical component of our entire economy, our nation's skilled workers. The increase in H1-B visas, which Senate Democrats have supported, is a stopgap measure, not a permanent solution.

Policy makers must act to ensure that these skilled labor shortages are addressed. Unfortunately, President Bush's 2002 budget actually cuts funds to the Department of Labor by five percent.

Last year, the Progressive Policy Institute Task Force proposed federal investment in industry-led regional skills alliances. Through the leadership of Senator Joe Lieberman, Congress passed legislation to allocate a share of the H1-B fees collected from industry to regional skills alliances. The Task Force also proposed that Congress provide tax incentives for companies donating computers to schools. With leadership from Congressional Democrats, this measure was passed and signed into law by President Clinton.

This year, Democrats propose to do much more.

Ensuring Technology Literacy by the Sixth Grade.

Our goal is for all children to be computer-literate by the sixth grade, regardless of race, gender, income, geography, ethnicity, or disability. To achieve this goal, we need to bring technology into schools and improve teacher training. Yet children don't learn just in school. They also learn in structured after-school programs in their communities through initiatives like Community Technology Centers (see Accelerating Digital Opportunity).

Require States to Set Science Educational Standards and Aligned Assessments.

Under current law, states set standards for learning in reading and math for all students and are required to align their assessments to these standards. States should also set standards for learning in science and align their assessments to these standards.

Improve Teaching in Math and Science.

Good research is now available on new ways to teach science and math more effectively. The federal government should provide \$500 million to schools to help teachers obtain professional development in these research-based teaching methods. These funds could also be used to help states and communities recruit and train math and science teachers and help teachers use information technologies to train themselves and others. These concrete steps will help achieve the important goal of ensuring a highly qualified teacher in every classroom and improving student learning and achievement in math and science. Representatives George Miller and Rush Holt have led efforts in the House to improve the quality and scope of science and mathematics education.

Permanently Extend the Section 127 Tax Credit for Employee Education.

We must promote investment by businesses in their human infrastructure -- their employees. Presently, the tax code allows employees to receive tax-free annual tuition assistance from their employers for undergraduate education. Democrats support making this provision permanent so that tuition benefits are fully deductible to companies, and support the restoration of coverage for graduate-level education.

Enhance Support for Distance Learning.

Information technology and the Internet must be harnessed to make educational opportunities more widely available to students, workers seeking retraining, military personnel stationed abroad, and older, part-time students seeking skills vital to success in the Information Age. Every student and teacher should have access to information technologies, regardless of their physical location and poverty level in order to develop the skills necessary to compete in a global economy. Americans should be given the opportunity to participate in 24-hour life-long learning opportunities that network technologies can provide.

Senators Leahy and Hatch have introduced the TEACH Act, S. 487, to amend the copyright law in ways to protect copyright owners and encourage distance education.

Increase Funding for High-Tech Workforce Training.

U.S. high-technology companies continue to face challenges in finding enough highly skilled workers to continue to innovate and stay strong and competitive in the global marketplace. Democrats strongly support increasing training opportunities for technology and other workers.

In the Senate, S. 8, the Enhancing Economic Security for America's Working Families Act, directs the Secretary of Labor to carry out programs or projects to provide technical skills training for workers, including both employed and unemployed workers, through grants to local or regional public-private partnerships.

Training Teachers in Technology.

While many schools now have access to technology and to the Internet, there is still a digital divide. We must continue to invest federal funds to help schools in the neediest communities modernize their schools through the Internet, computers, software, and other high-tech equipment. In addition, many teachers need better training in integrating technology effectively into the classroom. We should fund Education Technology in the Classroom at \$1 billion and Technology for Teachers at \$150 million in order to authorize the Preparing Tomorrow's Teachers to Use Technology program.

Senator Bingaman has introduced Technology for Teachers Act, which would set-aside 30% of educational technology funding for teacher training. It would also authorize the Preparing Tomorrow's Teachers in Technology program which provides the funding for preservice teacher education. Under the leadership of Senators Bingaman and Murray, this program has been funded at \$150 million. Democrats support the passage of Senator Bingaman's bill in the context

of ESEA reauthorization.

Provide Matching Grants to States for Incumbent Worker Training Programs.

Compared to the federal government, states are better positioned to work with companies to encourage worker training. But only a few states have established incumbent worker training programs to help existing companies upgrade the skills of their work force. To encourage more states to do this and to leverage more state resources, Democrats believe the federal government should establish a \$500 million per year matching grant program. These funds should not be used, however, as inducements to get firms to relocate from one place to another. They should reward training programs that use online initiatives to save money and reach more workers.

Collaborate with Industry to Fund Science and Engineering Graduate Study.

To increase both the number of Americans enrolled in science and engineering graduate programs and the amount of cross-disciplinary and industry-relevant graduate education, more graduate support should flow directly to students. The federal government should establish a matching grant fellowship program to pay a portion of the cost, with industry and universities funding the rest.

Encourage Industry to Outreach to Minority Serving Institutions.

Providing career opportunities to minorities is key to ensuring that all Americans have the opportunity to participate in the New Economy workforce. The information technology industry should be encouraged to work cooperatively to create mechanisms that link appropriately skilled minority job applicants with the IT employer community. Such mechanisms could include identifying sources of students at Historically Black Colleges and Universities, Hispanic Serving Institutions and tribal colleges, and developing enhanced recruitment at such institutions. Representatives Sheila Jackson-Lee, Eva Clayton, Barbara Lee and Silvestre Reyes are leading this effort.

IV. TRANSFORMING TO AN INFORMATION AGE ECONOMY

Overview: A driving force for productivity and wage growth in the Information Age economy will be the pervasive use of information technologies to increase efficiency and productivity, particularly in the service sector. Because of the rapid pace of change and the unique nature of the Internet, the government must tread lightly to avoid stifling technological progress while combating abusive practices. The government should also be a model citizen by demonstrating the best information practices.

Protect Online Privacy.

Online privacy is a critical concern facing Internet users today. That concern presents a significant impediment to utilization of the full array of services the Internet has to offer.

Industry and government agree that the Internet can reach its fullest potential only if individuals are convinced that their online communications, their transactions, their web surfing habits and

their personal information will remain private from either commercial or government snoops. Democrats are committed to working with industry and privacy advocates to provide a legal framework to protect users' personal privacy online. Self-regulatory efforts to encourage adoption and compliance with fair information practices, as well as the development and implementation of privacy technologies, play key, constructive roles in providing such protection. Still, these efforts cannot substitute for strengthening our legal framework to assure Americans that their privacy is protected.

Strengthening Cybersecurity.

Technology has made many of our nation's essential services – utilities, banking, communications, transportation and health care – enormously more productive and reliable. Recent well-publicized hacker attacks against web sites highlight the importance of a strong public-private partnership to protect our critical infrastructures. The government must redouble efforts to work with the private sector to strengthen our nation's networks against hackers. Domestic and international law enforcement agencies must have the necessary resources to protect our critical infrastructures. These agencies must also work in partnership with the private sector to exchange information and the best practices to help develop enhanced security mechanisms to stop on-line criminals and protect our national security. Specifically, Democrats believe that along with other government agencies tasked with cybersecurity, the Critical Infrastructure Assurance Office and the Department of Justice's Computer Crime Division must be funded adequately and given the resources they need to protect our networks.

Stem the Tide of Unsolicited Commercial E-mail.

Junk e-mail, sometimes called spam, is more than an Internet annoyance; it is an economic drag. It accounts for at least 10 percent of Internet service providers' operating costs, and, in some cases, as much as \$2 of consumers' monthly access fees. Without legislative action, the problem is likely to only get worse. We need legislation to control the abuses and empower consumers and Internet service providers.

Reforming the Export Controls System.

The United States requires an export control system that appropriately balances the needs of U.S. exporters to compete in the global marketplace with the national security interest in controlling the export of sophisticated commercial technologies that can have military applications. Democrats are eager to restructure the export control system to reflect current and future economic and national security realities.

Democrats strongly support the reauthorization of the Export Administration Act and believe that Congress should establish a permanent statutory framework for the exercise of export control authority by the President. For example, S. 149, the Export Administration Act of 2001, as recently reported by the Senate Banking Committee by a 19-1 bipartisan vote, would give the President needed discretion to impose controls on critical commercial technologies, while narrowing the controls to the most militarily significant technologies. The legislation would repeal the provision in the National Defense Authorization Act requiring the President to impose

controls on the export of high-speed computers above a designated MTOP level. It would also give the President new authority to determine that a good has mass market status in the U.S. and should therefore not be controlled. These are constructive reforms that Democrats strongly support.

Encourage the World Trade Organization to Adopt a Treaty Designating Cross-Border E-Commerce a Tariff-Free Zone.

E-commerce is by its very nature without borders. To fully flourish and fulfill its potential, it will need to be free of tariffs and other trade barriers. For example, some nations prohibit the sale of services (e.g., legal services, advertising) unless the firm is licensed nationally. Countries should not be allowed to impose tariffs or discriminatory taxes on e-commerce originating in other nations. The World Trade Organization should work to reduce non-tariff barriers to e-commerce.

Internet Taxation.

The Internet Tax Freedom Act, passed in 1998, placed a three-year moratorium on new Internet access and discriminatory taxes. The moratorium is set to expire in October, 2001. When Congress enacted the Internet Tax Freedom Act in 1998, our goal was to ensure that our tax policy toward electronic commerce was based on the principle of technological neutrality. We continue to believe that a technologically neutral tax policy is the best way to foster the growth of the Internet and e-commerce. Democrats support extending the moratorium and recognize the critical need to resolve the issues relating to the application of tax laws that apply to electronic commerce. Democrats will work during the 107th Congress to pass legislation that extends the current moratorium while establishing a framework for states and localities to collect sales and use taxes on remote sales after they have dramatically simplified their tax systems.

Improving INS Efficiency.

The Immigration and Naturalization Service's (INS) ability to process petitions and applications for the high-tech industry in a timely and consistent manner has deteriorated. Long backlogs, unacceptable delays, and poor customer service are the norm. Democrats support restructuring INS to enable the agency to function more effectively. Such reforms will enhance the processing of all immigration applications in a quicker, more efficient manner.

Create a System of Regional E-Commerce Assistance Centers to Help Small Businesses Embrace the Information Age.

Small businesses rely on federal services through the Small Business Administration, the Minority Business Development Agency, and the Manufacturing Extension Partnership Program, among others, to provide the support and advice they need to stay competitive in the new economy through the adoption of innovative business practices like e-commerce. The Administration's Budget Blueprint threatens to severely underfund these existing programs. This could undercut the competitiveness and sustainability of the nation's small businesses, including the growing number of home-based businesses.

Rather than undercut existing programs, Democrats support initiatives to assist small and medium size businesses in becoming more e-savvy. House Democrats, lead by Rep. Jim Barcia, passed legislation in the 107th Congress that authorized the Manufacturing Extension Partnership program in consultation with SBA to develop programs to assist small and medium size businesses in better utilizing e-commerce. We must continue to support such efforts in the remainder of the 107th Congress.

Establish the Position of Chief Information Officer (CIO) for the Federal Government and Establish a \$200 Million Fund to Invest in Cross-Agency E-Government Projects.

A key next step in reinventing government involves the widespread application of information technologies to the delivery of government services — in short, fostering E-government initiatives that will make government more efficient, faster, and less expensive. To foster digital government, we need to create a Chief Information Officer and empower that person with the funds necessary to make E- government happen.

During his campaign President Bush borrowed from the PPI Task Force's recommendations and proposed establishing a CIO and a digital government fund of \$100 million annually. The smaller \$20 million the President's budget allocates to the fund this year, coupled with his decision to reverse himself by not creating a separate position of CIO, suggests that he lacks the will to carry out his campaign promises in this area.

In contrast, Senator Lieberman's forthcoming digital government legislation, for which he is seeking bipartisan support, would establish a federal Chief Information Officer empowered with substantial funding, with the additional leverage that comes from reviewing agencies' IT budgets, and with responsibility for implementing federal laws on information policy and digital government. The CIO would administer an interagency IT fund that would invest in cross-agency IT projects as well as innovative projects that could have government-wide application. The bill would authorize \$200 million annually for the fund.

Digital government, of course, is not only about making the government more efficient. Senator Lieberman's bill will also promote the use of the Internet and other information technologies to provide more information and better services to Americans. For example, the CIO would further develop the centralized online portal so that online government information and services are organized according to citizen needs, not just agency jurisdiction. Regulatory agencies would conduct administrative rule-makings on the Internet. Agencies would pool their resources to create an online national library, and an online database of federally funded research and development. The bill would also contain significant new privacy protections for personally identifiable information maintained by the government.

Increase Electronic Access to Congress.

The Republican leadership in Congress should do more to increase electronic access to information paid for by the taxpayers and held by the Senate and House of Representatives. Toward this end, Senator Leahy has introduced a resolution, S. Res. 21, to require that

Congressional Research Service reports and briefs, lobbyist disclosure reports and Senate gift reports are made available online. Just as C-Span enhanced public access to Congress, increased access to congressional documents can give citizens the background they need to evaluate and provide more input into the decisions made by their congressional representatives.